

## 1 ☐ NAVY DRUG TESTING PROGRAM UPDATE

NADAP SUMMIT, 18 –20 JUNE 2002

Cheri Baird  
Deputy Program Manager  
Navy Drug Testing Program

Navy Environmental Health Center  
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## 2 ☐ NAVY DRUG TESTING PROGRAM

### 3 ☐ PROGRAM MANAGER RESPONSIBILITIES

The Office of the Navy Drug Testing Program Manager provides all aspects of program oversight for the Navy's Drug Testing Program including three Navy Drug Screening Laboratories:

- ▀ monitors quality assurance programs and performs technical inspections;
- ▀ issues and maintains the Standard Operating Procedures Manual;
- ▀ coordinates research and development projects;
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- ▀ coordinates memorandums of understanding and joint service contracts; and
- ▀ develops and analyzes statistical reports.

## 4 ☐ NAVY DRUG SCREENING LABORATORIES

## 5 ☐ SAMPLE WORKLOAD

## 6 ☐ SAMPLE TESTING

## 7 ☐ TESTING PROTOCOL

## 8 ☐ REPORTING RESULTS

- ▀ Turn-around time (amount of time between sample receipt at the lab and the lab reports results): 1-2 days for negative samples and 3-5 days for positive samples
- ▀ San Diego has switched to the Defense Messaging System (DMS); Jacksonville will begin using DMS (Summer 02)
- ▀ Exploring web-based reporting for the future; piloting a web-site for MEPS test status and results (Summer 02)

## 9 ☐ DoD CUTOFF LEVELS

Drug	Detection Time (days)	IA (ng/mL)	GC-MS (ng/mL)
Marijuana (THC)	3-5	50	15
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## 10 ☐ DRUG TESTING PROGRAM (DETERRENT EFFECT)

## 11 ☐ QUALITY ASSURANCE

## **PROGRAM**

- Internal: Control samples (open/blind) – prepared by the NDSL; included in all assays; results evaluated by NDSL senior chemists
- External: Proficiency samples (open/blind) – prepared by AFIP; results evaluated by AFIP
- Inspections: Minimum of 3 per year at each lab (forensic drug testing experts from outside and within DOD in addition to legal experts); Annual DoD certification inspection at each lab; Review of SOPs/LOPs, laboratory practices, data, and reports
- Monthly Internal Audits: NDSL review of data/test results
- Instrument and Method Validation Procedures
- Training and Certification Program

### 12 ☐ **TECHNOLOGY IMPROVEMENTS**

- DTP/NDSP: Samples/DD Forms 2624 submitted with bar-coded information that is scanned vice manually entered
  - Reduces sample processing time and reduces potential for transcription errors
- New Automated High Speed Screening Analyzers
  - Capability to screen more samples in less time
  - Compatible with a wider variety of screening reagents
- Semi-automated sample extractors
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- Laboratory Information Management System (LIMS)
  - tracks sample receipt, testing, results reporting, storage, and disposal
  - generates result messages
  - tracks sample submission discrepancies
  - generates a common database of drug testing data for DoD

### 14 ☐ **DRUG POSITIVES**

### 15 ☐ **ECSTASY POSITIVE SAMPLES**

### 16 ☐ **METHAMPHETAMINE and MDMA POSITIVES**

### 17 ☐ **NEW ECSTASY SCREENING REAGENT**

- Oct01: NDSL JX evaluated screening reagents claiming to be more sensitive to MDMA
  - AMPs reagent used since 1996 only 30% cross reactive to MDMA
- Nov01: Contract awarded for a new AMP/MET/MDMA screening reagent
- Jan02: NDSL JX/SD used the new reagent for one week
  - Did not meet contract specs for 50% confirmation rate (<10%)
  - Excessive cross-reactivity to over-the-counter cold medication/ephedrine products
- Jan02: NDSL JX/SD reverted back to original AMPs reagent

### 18 ☐ **ANOTHER NEW ECSTASY REAGENT**

- Feb/Mar02: NDSL JX evaluated screening reagent options in a side-by-side study
- Apr02: Contract awarded for screening reagent specific for Ecstasy (95% confirmation rate)

- 19 ☐ ➡ Jun02: NDSLs JX/SD began using the new reagent for Ecstasy detection and will continue to use the AMPs reagent for AMP/MET detection
- ➡ Install an automated pouring instrument at NDSL GL (minimize sample handling and improve forensic integrity)
- ➡ MEPS
  - ➡ RTC
- ➡ Implement web-based reporting for MEPS
- ➡ Implement Defense Messaging System at NDSL JX
- 20 ☐ ➡ Develop DD Form 2624 scanning capability
- ➡ Request permission from Navy/DoD to implement 2-oxo-3-hydroxy-LSD LC/MS procedure
- ➡ Request permission from Navy/DoD to reduce AMPs confirmation cutoff from 500 to 250 ng/mL

21 ☐ **LEGAL SUPPORT**

22 ☐ **COMMON DEFENSES**

- ➡ passive inhalation/absorption of THC
- ➡ “innocent” or unknowing ingestion of various food items (i.e., brownies, spaghetti sauce) that supposedly have had marijuana added to them
- ➡ “fairy dust” defense or “somebody must have put cocaine in my drink”

23 ☐ **CONTRARY TO POPULAR BELIEF...**

- ➡ ... passive inhalation of marijuana smoke (under real world conditions) will not cause a positive THC result.
- ➡ ... over the counter medications and weight loss products (i.e., ephedrine, pseudoephedrine) will not cause a positive methamphetamine result.
- ➡ ... a positive morphine result from ingestion of large concentrations of poppy seeds can be distinguished from codeine/morphine use. (Medical Review of codeine/morphine results is required.)

24 ☐ **CONTRARY TO POPULAR BELIEF...**

- ➡ ... Vick’s inhaler will not cause a positive methamphetamine result because the laboratories distinguish between the different forms (d vice l) of methamphetamine.
- ➡ ... novocaine, lidocaine, and xylocaine will not cause a positive cocaine result.
- ➡ ... over-the-counter herbal nutritional supplements (manufactured and sold in the US) will not cause a positive THC result. THC levels in hemp oil products have been significantly reduced through DEA regulation.

25 ☐ **ISSUES IN COURT**

- ➡ Collection Process (sample submission discrepancies):
  - ➡ incomplete chain of custody
  - ➡ missing/mis-matching/incorrect information on the bottle or custody document
  - ➡ non-forensic corrections

**Direct Observation:**

Adulteration – adding something to the sample that destroys the drug or interferes w/ the test

Dilution – adding something (water) to the sample that lowers the drug concentration (also achieved through hydration)

## 26 ISSUES IN COURT

### ➡ Decisions from CAAF

- ➡ US v. Campbell (1999): to prove wrongful use, the prosecution was required to show that the accused would have experienced the physical and psychological effects of the drug
- ➡ US v. Green (2001): removed above requirement; allowed drug use to be inferred from presence of drug in urine

### ➡ Previous Problems at DoD Drug Labs

## 27 DRUG LAB POINTS OF CONTACT

GREAT LAKES                      DSN 792, (847) 688-2045, EXT 12  
FAX, (847) 688-5513  
ADMIN, EXT 10

JACKSONVILLE              DSN 942, (904) 542-9639  
FAX, (904) 542-7761  
ADMIN, (904) 542-9612

SAN DIEGO                      DSN 522, (619) 532-7141  
FAX, (619) 532-7337  
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## 28 ANY QUESTIONS?



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# NAVY DRUG TESTING PROGRAM

## Mission

To ensure accurate and legally defensible drug testing for Navy and Marine Corps active duty and recruits, and military applicants.

## Vision

We are world-class leaders, recognized for our:

- accurate drug test results;
- expertise in forensic drug testing;
- dedication to quality customer service; and
- ability to meet the ever-changing demands of drug deterrence through research and development.



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# NAVY DRUG SCREENING LABORATORIES

## ➔ NAVDRUGLAB Great Lakes:

4 Officers / 52 Civilians / 14 Temps

CO: CDR Dave Lesser

XO: LT Maggie Talbot

## ➔ NAVDRUGLAB Jacksonville:

4 Officers / 64 Civilians / 6 Temps

CO: LCDR Kevin Klette

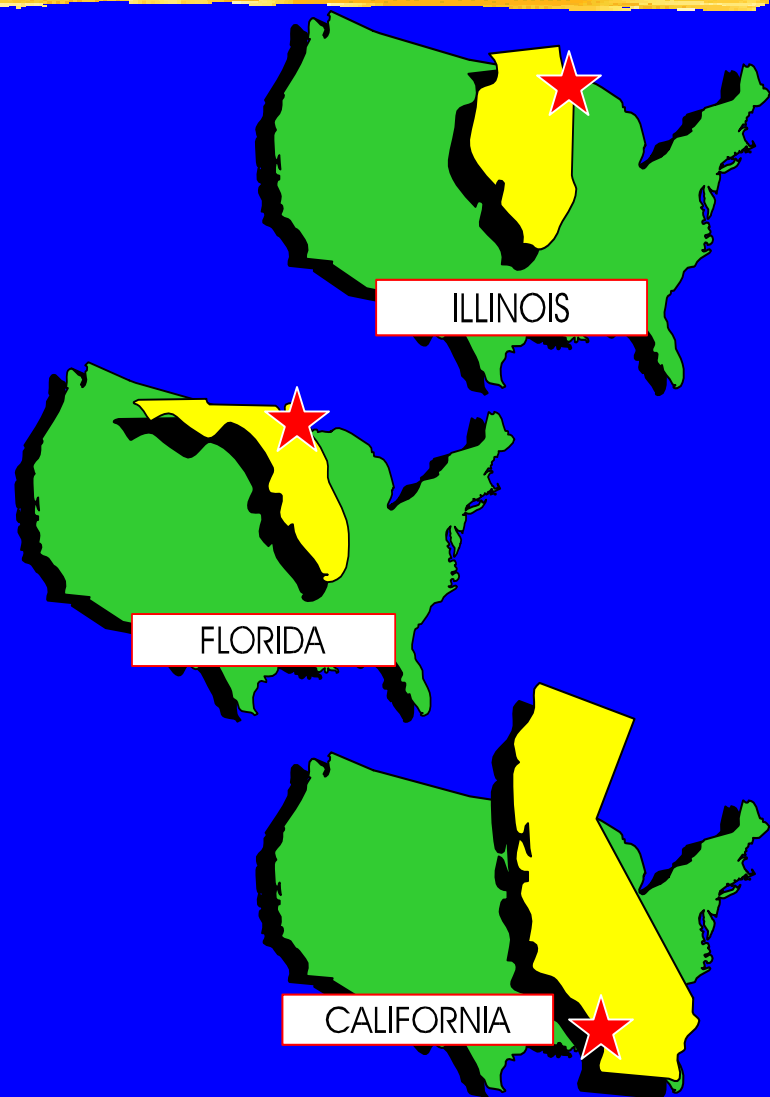
XO: LT Pete Stout

## ➔ NAVDRUGLAB San Diego:

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CO: CAPT Margaret Moynihan

XO: LT Cynthia Anderson

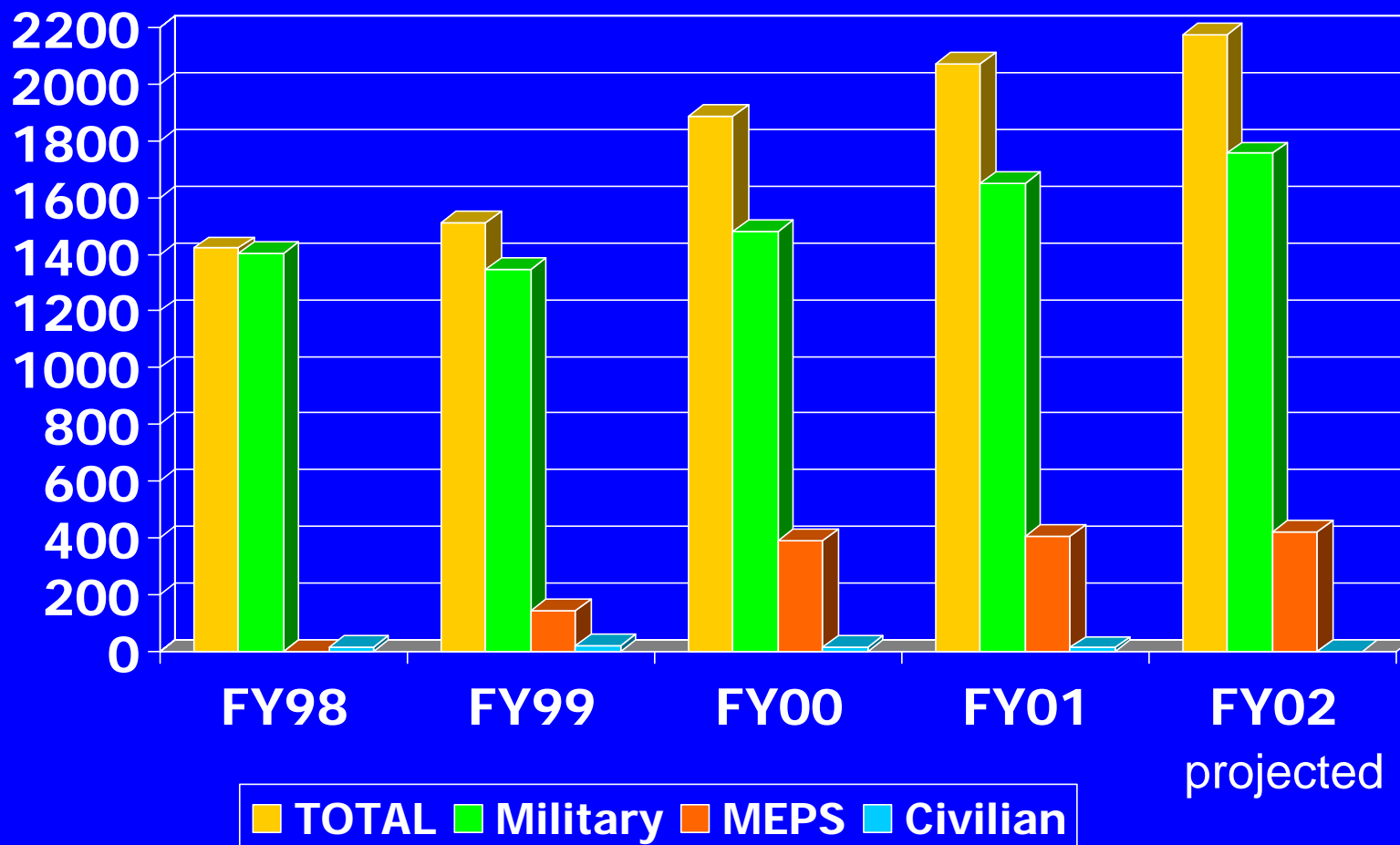






# SAMPLE WORKLOAD

Thousands





# SAMPLE TESTING

- All Navy/Marine Corps, active duty/reserve samples tested for:
  - THC (marijuana)
  - Benzoylecgonine (metabolite of cocaine)
  - Amphetamines (amphetamine, methamphetamine, and designer drugs: MDA, MDMA, MDEA)
- 10 - 50% of samples “pulse” tested for:
  - LSD
  - Opiates (codeine, morphine, heroin)
  - PCP
  - Barbiturates (butalbital, phenobarbital, secobarbital)
- All military applicants (MEPS) samples tested for:
  - THC (marijuana)
  - Benzoylecgonine (metabolite of cocaine)



# TESTING PROTOCOL

- **Three positive tests are required to release a positive result.**
  - All samples initially screened by immunoassay for 3-7 drug classes (MEPS; 2 drugs).
  - Samples that test positive are tested again by immunoassay for the specific drug class(es) for which they initially screened positive.
  - Samples that test positive on both immunoassay tests are analyzed by gas chromatography-mass spectrometry (GC-MS) to confirm the presence and concentration of drug in the urine.
- **Positive samples retained for 1 year and may be retested upon request by the command.**



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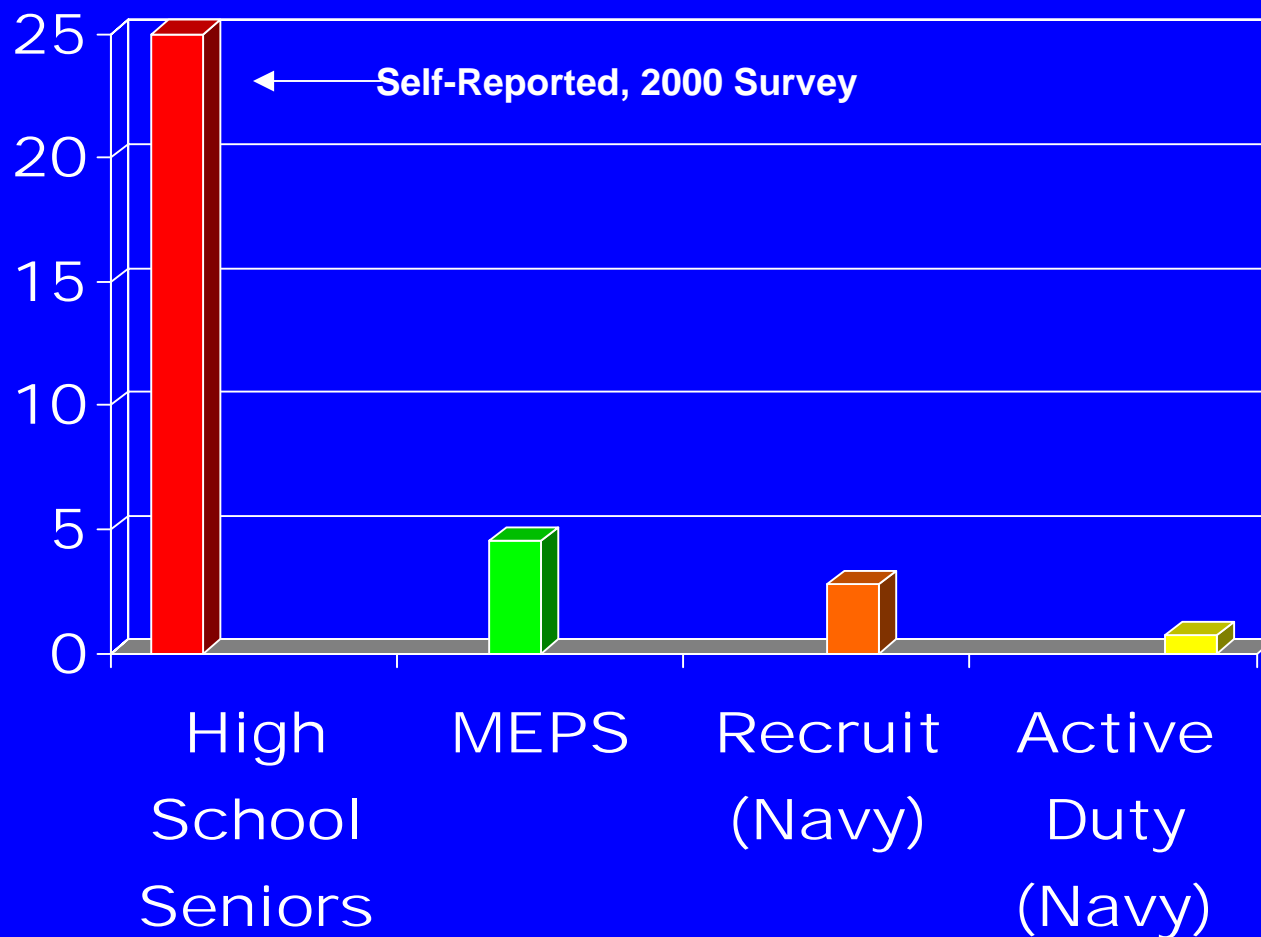


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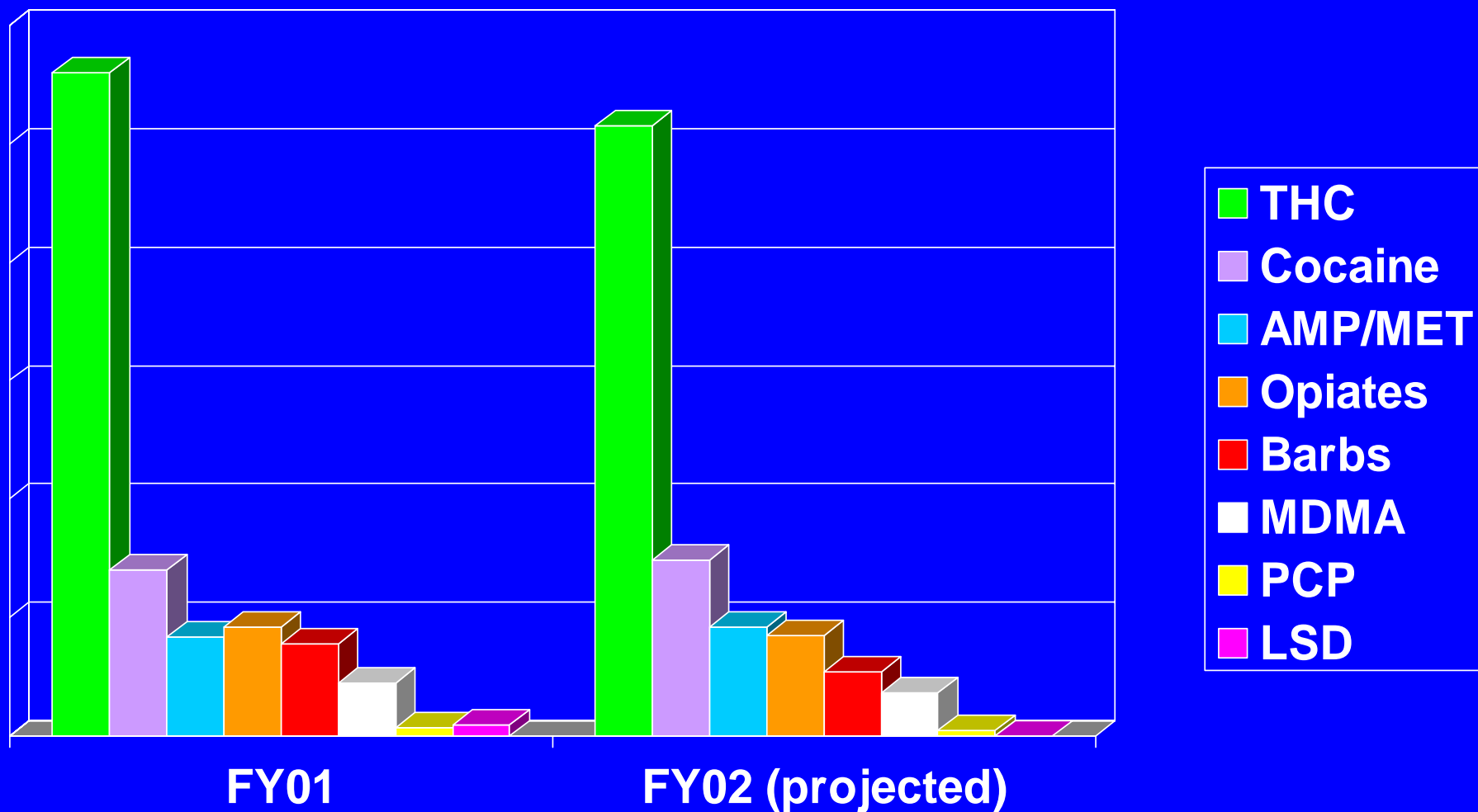


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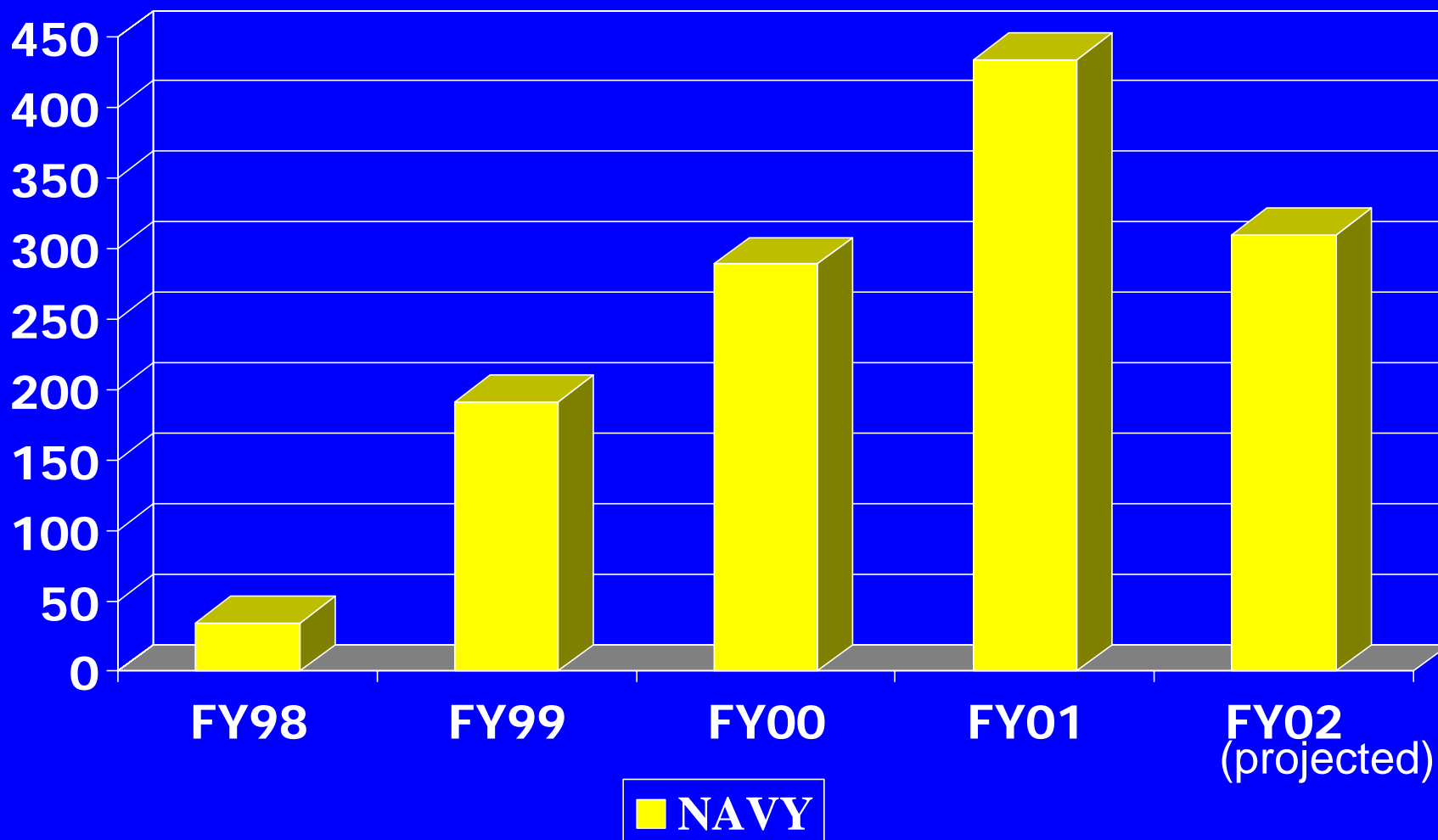


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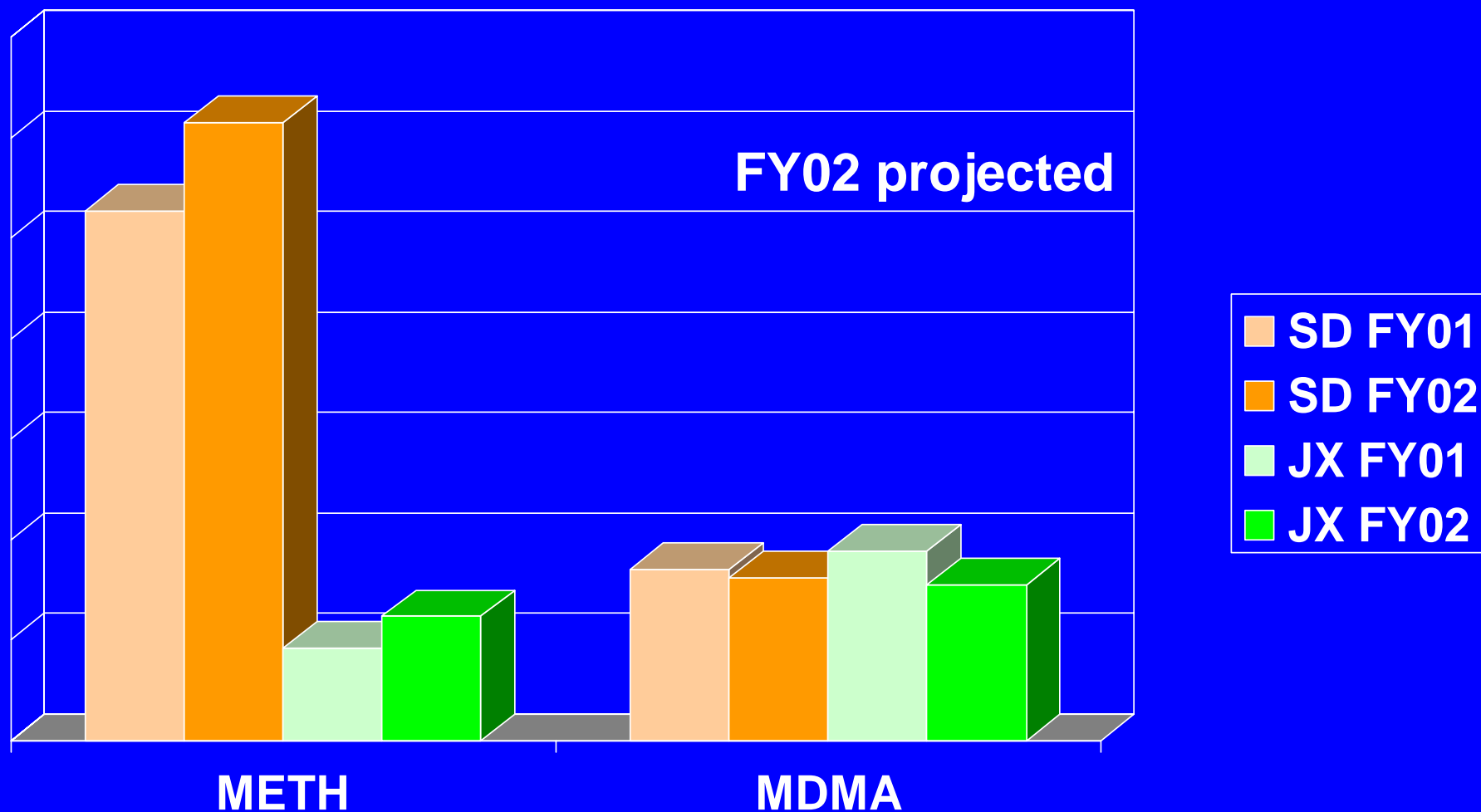


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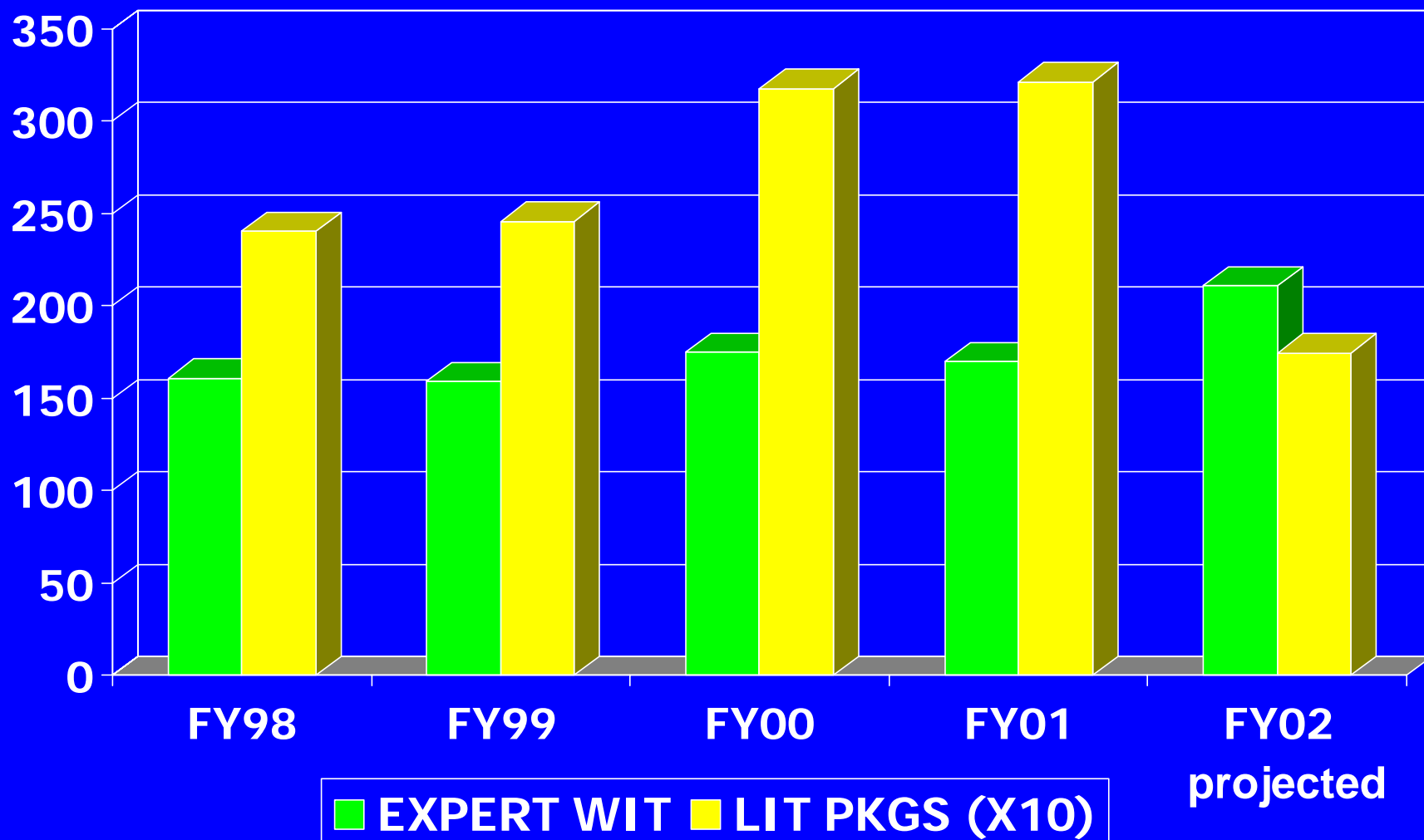
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FAX, (619) 532-7337  
ADMIN, (619) 532-5183

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## ANY QUESTIONS?

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